CLAIMS

Claim 1 (currently amended): A process of forming an assembly, the method comprising:

providing a thermosettable material, the material being selected from a sheet molding compound, a bulk molding compound, or a combination thereof wherein the thermosettable material includes a fibrous reinforcement material selected from polymeric fibers, metal fibers, carbon fibers, graphite fibers, polyester fibers, glass fibers, silicon carbide fibers, alumina fibers, titanium fibers, steel fibers or combinations thereof and wherein the fibrous reinforcement material is 1% to 60% by weight of the thermosettable material;

molding the thermosettable material at an elevated temperature to form a carrier member;

applying an activatable material to a surface of the carrier member for forming a reinforcement member wherein the activatable material is a heat foamable material that includes epoxy resin;

placing the reinforcement member within a cavity or adjacent to a surface of an automotive vehicle, the cavity or surface being defined by one or more walls of a structure of the automotive vehicle; and

activating the activatable ~~expandable~~ material to form an epoxy based structural foam that is adhered to the carrier member and the surface or walls of the structure of the automotive vehicle, the structural foam having a high compressive strength.

Claim 2 (previously presented): A process as in claim 1 wherein the thermosettable material includes a thermosettable resin that is based upon at least one of a polyester, a terephthalate, a vinyl ester, an epoxy or a combination thereof.

Claim 3 (previously presented): A process as in claim 2 wherein the thermosettable resin is between about 30% and about 60% by weight of the thermosettable material.

Claim 4 (original): A process as in claim 2 wherein the thermosettable material includes a curing agent selected from a free radical initiator, an organometallic, an oxide catalyst, a peroxide catalyst, a polyhidric initiator or a combination thereof.

Claim 5 (cancele)

Claim 6 (previously presented): A process as in claim 2 wherein the reinforcement material is glass fibers and the reinforcement material is 10% to 40% by weight of the thermosettable material.

Claim 7 (original): A process as in claim 6 wherein greater than about 50% of the fibers have a length greater than about 1.5 inches.

Claim 8 (previously presented): A process as in claim 1 wherein the activatable material comprises strips of substantially uniform thickness.

Claim 9 (original): A process as in claim 1 wherein the step of molding the thermosettable material includes compressing the molding compound in a die.

Claim 10 (original): A process as in claim 9 wherein the mold is heated to a temperature between about 200 °F and about 450 °F for molding the thermosettable material.

Claims 11-15 (canceled)

Claim 16 (previously presented): A process as in claim 1 wherein:

i. the structure is a pillar of the automotive vehicle;

ii. the thermosettable material is based upon at least one of a polyester or a vinyl ester;

iii. the step of molding the material is carried out at an elevated temperature in a heated mold;

iv. the reinforcement member, upon activation and adhesion of the activatable material provides reinforcement to the structure of the automotive vehicle.

Claim 17 (previously presented): A process as in claim 16 wherein the step of applying the activatable material includes:

i) contacting the activatable material with the surface of the carrier member as a temperature of the carrier member declines from the elevated temperature achieved during the molding step, such contacting thereby softening a portion of the activatable material with the heat of the carrier member to wet the surface of the carrier member; and

ii) allowing the softened portion of the activatable material to harden and adhere the activatable material to the carrier member.

Claim 18 (previously presented): A process as in claim 17 wherein the activatable material is applied to the carrier member as a plurality of shaped pieces.

Claim 19 (previously presented): A process as in claim 18 wherein the step of applying the activatable material to the carrier member further includes supporting the carrier member with a fixture.

Claim 20 (previously presented): A process as in claim 19 wherein the fixture includes a support member and a support surface, the support surface including a plurality of cavities and wherein the contacting of the activatable material with the surface of the carrier member includes placing the plurality of shaped pieces into the plurality of cavities and supporting the carrier member upon the support member such that the pieces contact the surface of the carrier member.

Claim 21 (previously presented): A process as in claim 20 wherein the fixture includes one or more actuating arms and wherein the step of contacting the activatable material with the surface of the carrier member include supporting the pieces of activatable material on the one or more arms and actuating the arms to contact the pieces with the surface of the carrier member.

Claim 22 (previously presented): A process as in claim 1 wherein greater than about 50% of the fibers have a length greater than about 1.5 inches.

Claim 23 (previously presented): A process as in claim 1 wherein the thermosettable material includes 10% to 50% by weight fillers selected from fumed silicate, calcium carbonate, talc, chopped fibers, nanoclay and glass or plastic microspheres.

Claim 24 (previously presented): A process as in claim 1 wherein the carrier member is formed in a shell configuration that forms an internal cavity within the carrier member.

Claim 25 (previously presented): A process as in claim 1 wherein the activatable material comprises multiple strips that are disposed upon various surfaces of the carrier member.

Claim 26 (previously presented): A process as in claim 1 wherein the structure of the automotive vehicle is a D-pillar.

Claim 27 (previously presented): A process as in claim 1 wherein:

i. the fibrous material includes glass fibers and greater than about 50% of the fibers have a length greater than about 1.5 inches;

ii. the thermosettable material includes 10% to 50% by weight fillers selected from fumed silicate, calcium carbonate, talc, chopped fibers, nanoclay and glass or plastic microspheres;

iii. the carrier member is formed in a shell configuration that forms an internal cavity within the carrier member;

iv. wherein the activatable material comprises multiple strips that are disposed upon various surfaces of the carrier member; and

v. wherein the structure of the automotive vehicle is a D-pillar.